

CIRCULAR RUBBER SEAL

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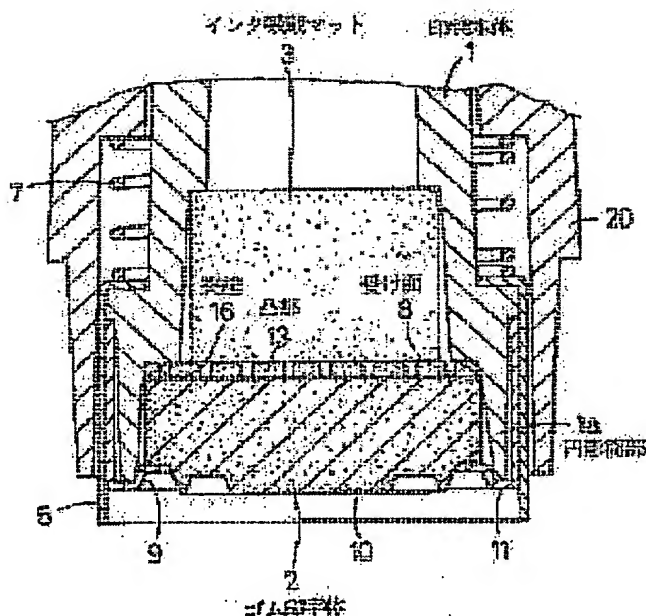
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Abstract of JP 8108606 (A)

PURPOSE: To enable rotation-stop of a rubber printing body, by a method wherein a protrusion group is compressed and deformed in advance at the time of sealing through which unevenness in height of printing surfaces can be absorbed, and a projection of a receiving surface is fitted into a hollow of the rubber printing body. **CONSTITUTION:** A porous rubber printing body 2 is fitted into a cylindrical part 1a of the lower end of a seal main body 1 and an ink absorbing and storing mat 3 is arranged on the rubber printing body 2. A large number of protrusions 13 are formed integrally extending over the whole surface of the top of the rubber printing body 2. The top of the rubber printing body 2 is made to bring into contact with the bottom of the ink absorbing and storing mat 3 through the protrusion group 13.; The cylindrical part 1a possesses the receiving surface on the inside and catches the outer circumferential part of the top of the rubber printing body 2 by the receiving surface 8. Then a projection 16 is provided on the receiving surface 8 and then on the top of the rubber printing body 2, it possesses a hollow between the protrusions 13, adjoining to each other and the projection 16 is fitted into the hollow.



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CLAIMS

[Claim(s)]

[Claim 1]The porous rubber stamp character style 2 circularly formed in the circular cylinder part 1a of a lower end by the side of the main part 1 of a stamp is fitted in, It is allocated so that the ink occlusion mat 3 may be located on the rubber stamp character style 2 in the circular cylinder part 1a, In a round shape rubber stamp seal in which formed protruding of much heights 13 is carried out to the upper surface 12 of the rubber stamp character style 2 over the whole surface at one, and the upper surface 12 of the rubber stamp character style 2 touches the undersurface 14 of the ink occlusion mat 3 via heights 13 group, A round shape rubber stamp seal which the downward receptacle side 8 which receives an outer periphery part of the upper surface 12 of the rubber stamp character style 2 is formed in inner skin of the circular cylinder part 1a by the side of the main part 1 of a stamp, and has prepared a proper place of this receptacle side 8 the projection 16 which engages with the dent 15 between said heights 13 of an outer periphery part in the upper surface 12 of the rubber stamp character style 2.

[Claim 2]The porous rubber stamp character style 2 circularly formed in the circular cylinder part 1a of a lower end by the side of the main part 1 of a stamp is fitted in, It is allocated so that the ink occlusion mat 3 may be located on the rubber stamp character style 2 in the circular cylinder part 1a, In a round shape rubber stamp seal in which formed protruding of much heights 13 is carried out to the upper surface 12 of the rubber stamp character style 2 over the whole surface at one, and the upper surface 12 of the rubber stamp character style 2 touches the undersurface 14 of the ink occlusion mat 3 via heights 13 group, A round shape rubber stamp seal forming in inner skin of the circular cylinder part 1a by the side of the main part 1 of a stamp the downward receptacle side 8 which receives an outer periphery part of the upper surface 12 of the rubber stamp character style 2, and having established the notched side 16a which engages with an outer periphery part in the upper surface 12 of the rubber stamp character style 2 in this receptacle side 8.

[Claim 3]The round shape rubber stamp seal according to claim 1 or 2 in which formed protruding of much heights 13 is carried out to the upper surface 12 of the rubber stamp

character style 2 in a grid pattern.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention relates to the osmosis rubber stamp seal and the round rubber stamp seal called the name seal in more detail which were provided with the porous rubber stamp character style which enables continuation seal in the lower end cylinder part of the main part of a stamp.

[0002]

[Description of the Prior Art]In this conventional seed rubber stamp seal, if an accompanying drawing explains, the porous rubber stamp character style 2 is fixed via the fastening plate 9 in the circular cylinder part 1a of the lower end of the main part 1 of a stamp, and it has allotted so that the undersurface 14 of this may contact the upper surface 12 of the rubber stamp character style 2 completely in the ink occlusion mat 3 in the circular cylinder part 1a. According to this, occlusion of the ink is beforehand supplied and carried out to the ink occlusion mat 3 from the upper part, and the rubber stamp character style 2 is made to shift to use with this ink.

[0003]However, since the rubber stamp character style 2 is porosity, it is easy to carry out the compression set of it, and as shown in drawing 6, it needs to set up strictly the projection dimension S S of the stamp face 10 of a lower end, i.e., the size between the fastening plate 9 and the stamp face 10. If this projection dimension S is too large, the stamp face 10 will carry out a compression set superfluously at the time of seal, a seal carries out shape collapse, and ink is solid ****. It is because it will become seal impossible or a blur will appear in a seal, if the projection dimension S is too small. However, in order to manage the above-mentioned projection dimension S severely, it is necessary to raise the manufacturing accuracy of the main part 1 of a stamp, the rubber stamp character style 2, the fastening plate 9, etc., and to also secure attachment accuracy, and productivity, a yield, etc. worsen and this makes the unit price of the product high as a result. But member mark of form [the height control mechanism of a stamp face / in the main part 1 of a stamp / independently] increase, and a manufacturing cost attaches it highly.

[0004]Then, by Japanese Patent Application No. No. 294257 [five to], these people did formed protruding of much heights 13 to the upper surface 12 of the rubber stamp character style 2 over the whole surface at one so that it might illustrate, and they proposed the rubber stamp seal of the structure of contacting the upper surface 12 of the rubber stamp character style 2 on the undersurface 14 of the ink occlusion mat 3 via heights 13 group. Since said heights 13 group will precede and carry out a compression set if the lower end stamp face 10 of the rubber stamp character style 2 which is rich in compression-set nature is pushed on space according to this, When setting up more greatly than before said projection dimension S of the stamp face 10, what absorbs with Bala of this projection dimension S well, and can respond to a dimensional accuracy error was obtained.

[0005]However, he noticed another problem. In the round shape stamp which made the rubber stamp character style 2 circular, it does not go to the reason for ****(ing) from the first in the circular cylinder part 1a of the main part 1 of a stamp, and fixing with ****, but when ink is included, it has the disposition that it naturally swells. Therefore, when the ink content in the rubber stamp character style 2 became less at the time of use, in the surroundings, the rubber stamp character style 2 saw carelessly generating of the inferior goods sealed in the state where it does not agree with the front display 17 provided in the outside surface of the main part 1 of a stamp within the circular cylinder part 1a.

[0006]In order to plan the baffle of such rubber stamp character style 2, in JP,2-43745,Y, two or more projections to which the tip sharpened in the circular cylinder part 1a by the side of the main part 1 of a stamp are protruded downward, and these each projection eats into the upper surface 12 of the rubber stamp character style 2 using the elasticity of this very thing. According to this, the relative baffle of the rubber stamp character style 2 can be planned.

[0007]

[Problem(s) to be Solved by the Invention]However, since the porous rubber stamp character style 2 is rich in elasticity, it dents into the portion into which said projection was made to eat, and modification is produced, and this dent modification affects the upper surface 12 of the rubber stamp character style 2. Depending on the case, it dents even in the lower end stamp face 10 of the rubber stamp character style 2, and modification and a stamp face also become a factor which is not finished in flat-tapped-like high degree of accuracy. In addition, that the rubber stamp character style 2 receives the above-mentioned dent modification means that an internal continuation stoma receives a compression set, and the flow of the ink in an applicable portion worsens. Therefore, in the lower end stamp face 10 of the rubber stamp character style 2, ink oozes out, it produces with Bala in quantity, solid one and a blur appear in a part of seal, and there is a possibility of causing seal nonuniformity.

[0008]Then, even if the purpose of this invention is provided with an ink occlusion mat and porous rubber stamp character style and is in the projection dimension of the stamp face of the rubber stamp character style from the main part of a stamp with Bala in the round

shape rubber stamp seal in which continuation seal is possible, it absorbs with this Bala by a simple means, and is to enable always clear continuation seal. Other purposes of this invention are to obtain the round shape stamp which provided the baffle means to the circular rubber stamp character style fitted in in the circular cylinder part of the lower end by the side of the main part of a stamp.

[0009]

[Means for Solving the Problem]A round shape rubber stamp seal of this invention has fitted in the porous rubber stamp character style 2 formed circularly in the circular cylinder part 1a of a lower end by the side of the main part 1 of a stamp, as shown in drawing 5, and it is allocated so that the ink occlusion mat 3 may be located on the rubber stamp character style 2 in the circular cylinder part 1a. Formed protruding of much heights 13 is carried out to the upper surface 12 of the rubber stamp character style 2 over the whole surface at one, and the upper surface 12 of the rubber stamp character style 2 touches the undersurface 14 of the ink occlusion mat 3 via heights 13 group. As shown in drawing 4, specifically, much heights 13 are formed in the rubber stamp character style 2 in a grid pattern.

[0010]In this round shape rubber stamp seal, by this invention, as shown in drawing 1 and drawing 3, the downward receptacle side 8 which receives an outer periphery part of the upper surface 12 of the rubber stamp character style 2 is formed in inner skin of the circular cylinder part 1a by the side of the main part 1 of a stamp, but. The projection 16 is protruded on a proper place of this receptacle side 8, and it was made for said projection 16 to engage with the dent 15 between said heights 13 of an outer periphery part in the upper surface 12 of the rubber stamp character style 2. Or as a baffle means, as shown in drawing 8, the notched side 16a replaced with the projection 16 is formed in said receptacle side 8, and it is made for this notched side 16a to engage with an outer periphery part in the upper surface 12 of the rubber stamp character style 2.

[0011]

[Function]The porous rubber stamp character style 2 is rich in compression-set nature from the first. Therefore, if the stamp face 10 is pressed in space as shown in drawing 6, a compression set will be previously carried out positively from each heights 13 by the reaction force. Therefore, even if it sets up the projection dimension S of the stamp face 10 more greatly than before, the size error is absorbed by the compression set of heights 13 group. Since each heights 13 are always in contact with the ink occlusion mat 3, whenever the ink in the rubber stamp character style 2 runs short, the heights 13 are not restricted to the time when the compression set is carried out, but ink flows in the rubber stamp character style 2 from the ink occlusion mat 3 via each heights 13 group.

[0012]As for the upper surface 12 of the rubber stamp character style 2, in the circular cylinder part 1a by the side of the main part 1 of a stamp, the outer periphery part is caught by the receptacle side 8 of the circular cylinder part 1a via said heights 13. The projection 16 prepared for the proper place of the receptacle side 8 at this time enters and engages with the dent 15 between the heights 13.13 which adjoin in the upper surface 12 of the

main part 1 of a stamp, and the rubber stamp character style 2 is prevented from turning to a hoop direction within the circular cylinder part 1a now. Since this projection 16 will fall and engage with the dent 15 between the heights 13.13 if the rubber stamp character style 2 turns even when it is small even if it may have been ridden on the heights 13 by the projection 16 at the time of inclusion, rotation beyond it of the rubber stamp character style 2 is prevented. If this projection 16 is formed in two or more places, a possibility that one of the projections 16 of it will engage with the dent 15 at least at the time of inclusion will become high.

[0013]When having formed the notched side 16a in said receptacle side 8 extensively or selectively, The baffle of the rubber stamp character style 2 is planned without this notched side's 16a carrying out friction engagement at the rugged form upper surface 12 of the main part 1 of a stamp produced by said heights 13 group, and exerting press deformation even on the inside of the main part of the rubber stamp character style 2 also by this.

[0014]

[Effect of the Invention]In this invention, since heights 13 group of a large number provided in one precedes with the upper surface 12 of the rubber stamp character style 2 at the time of seal and carries out a compression set to it, even if it sets up the projection dimension S of the stamp face 10 more greatly than before, the error of said size S will be absorbed by the compression set of the heights 13, and always clear continuation seal is attained. That is, since tolerance level of the process tolerance of the rubber stamp character style 2, the fastening plate 9, etc. thru/or attachment accuracy is made widely, without causing deterioration of quality, productivity improves and an osmosis rubber stamp seal can be provided cheaply.

[0015]Said projection 16 or the notched side 16a formed in said receptacle side 8 in this invention, Since **** engagement is carried out at the upper surface of the rubber stamp character style 2 using the heights 13 of the upper surface of the rubber stamp character style 2, While being able to prevent the circular rubber stamp character style 2 from turning carelessly by this within the circular cylinder part 1a of the lower end of the main part 1 of a stamp, existence of this baffle has an advantage which can also lose an adverse effect, such as applying a compression set to the inside of the main part of the rubber stamp character style 2.

[0016]

[Example]

(The 1st example) Drawing 1 thru/or drawing 6 are shown and the 1st example of the round shape rubber stamp seal concerning this invention in the circular cylinder part 1a of the lower end by the side of the round main part 1 of a stamp, The porous rubber stamp character style 2 fabricated circularly is fixed, and in the circular cylinder part 1a, the ink occlusion mat 3 is located above the rubber stamp character style 2, and it has allocated.

[0017]In drawing 2, the periphery upper part of the main part 1 of a stamp is equipped with the cap 4 of the longwise cylindrical shape which served as the grip part, enabling free

attachment and detachment, the circular stand 5 plans the slip off stop to a lower part, and the lower end side of the main part 1 of a stamp is equipped with it free [a vertical slide]. If the cap 4 is removed, ink can be supplied to the ink occlusion mat 3 from the upper part via the upper bed opening 6 of the main part 1 of a stamp. With the compression spring 7 with which it equipped between the upper bed of this, and the main part 1 of a stamp, the stand 5 projects caudad and is energized.

[0018]In drawing 2, the rubber stamp character style 2 is fabricated with the porous rubber material which has a continuation stoma. The circular cylinder part 1a is substantially formed ** with the stage by the same thickness, as shown in drawing 3.

Therefore, it has the downward receptacle side 8 with the stage in inner skin, and from this receptacle side 8, a lower part becomes a larger diameter and the upper part has small diameter.

To the circular cylinder part 1a, the ink occlusion mat 3 point-puts in, and is carried out from the opening undersurface side of this, and, subsequently the rubber stamp character style 2 fits in. And as shown in drawing 5, the rubber stamp character style 2 is fixed to the main part 1 of a stamp via the fastening plate 9 under the state which the outer periphery part of the upper surface 12 of this won popularity, and was responded to in respect of eight. The lower end edge of the fastening plate 9 is the lower end edge 11 of the main part 1 of a stamp, and the stamp face 10 of the lower end of the rubber stamp character style 2 has projected slightly down this lower end edge 11.

[0019]The ink occlusion mat 3 is formed in porous cylindrical shape by vinyl acetate etc. The porosity and pore diameter of the ink occlusion mat 3 are larger than that of the rubber stamp character style 2, rather than the rubber stamp character style 2, it is hard, and the ink included in the ink occlusion mat 3 shifts and goes to the rubber stamp character style 2 with use. As shown in drawing 3 and drawing 5, up another receptacle side 8a with the stage is formed in the inner skin of the circular cylinder part 1a from said receptacle side 8, The outer periphery part of the upper surface of the ink occlusion mat 3 is caught by this receptacle side 8a, and the undersurface 14 of the ink occlusion mat 3 contacts the upper surface 12 of the rubber stamp character style 2 in this state.

[0020]At the time of non-use, as shown in drawing 1, the lower part of the stand 5 has projected under the main part 1 of a stamp by the resiliency of the compression spring 7. The stamp face 10 of the rubber stamp character style 2 is prevented from touching space etc.

If the lower end opening part of reliance of the stand 5 is in space when using it and the main part 1 of a stamp is pushed from the upper part, as shown in drawing 6, the spring power of the compression spring 7 will be resisted, the stand 5 will go up, and the stamp face 10 will contact space.

[0021]In this round shape rubber stamp seal, as shown in drawing 1 and drawing 4, much small heights 13 over the whole surface on the upper surface 12 of the rubber stamp character style 2 every constant interval. Formed protruding is specifically carried out to

one in a grid pattern, and it was made for the upper surface 12 of the rubber stamp character style 2 to contact the flat undersurface 14 of the ink occlusion mat 3 via heights 13 group of this. In drawing 4, each of those heights 13 were formed in the 0.7-mm-high regular tetragon a length of one side is 1.0 mm, and set width of the allocation pitch 15 of each heights 13, i.e., the dent between each adjoining heights 13.13, to about 1.0 mm. Within the limits of 0.7-1.0 mm, the height of each heights 13 can be made equivalent to the size of the stamp face 10, and can be changed. And the size S between the lower end edge 11 of the main part 1 of a stamp and the stamp face 10 was set as 0.3-0.5 mm. The projection dimension S of this stamp face 10 is a little larger than conventional it.

[0022]In drawing 6, if the stamp face 10 is forced on space until the lower end edge 11 of the main part 1 of a stamp **** in space, first, it precedes, and each heights 13 group will carry out a compression set, and will absorb the compression-set power in which it is added now to the stamp face 10. That is, the porous rubber stamp character style 2 is further apt to carry out the compression set of each heights 13 with a small cross-section area, although it is rich in compression-set nature from the first. Therefore, even if it sets up the projection dimension S of the stamp face 10 more greatly than before, heights 13 group precedes, and since a compression set is carried out, excessive compression-set power does not reach the stamp face 10. As a result, the clear seal without the shape collapse of a seal or stickiness of ink can be performed. Since the above-mentioned size S was set as the larger size than before and set when putting in another way, the osmosis rubber stamp seal has been manufactured without having attached to the process tolerance of the main part 1 of a stamp, the rubber stamp character style 2, the fastening plate 9, etc., and it, and receiving big influence in accuracy.

[0023]The ink of an applicable portion's being impregnated is pressed out by said dent 15 because each heights 13 carry out a compression set. Since each heights 13 are always in contact with the ink occlusion mat 3 at it also including the time of non-use, if the ink in the rubber stamp character style 2 decreases in number, ink will permeate and go to the rubber stamp character style 2 from the ink occlusion mat 3 via these heights 13, and continuation seal will be enabled. Since said dent 15 functions also as ink *****, its total amount of the ink impregnated in a stamp increases, and its clear number of times of seal also increases.

[0024]the round shape stamp of the above-mentioned structure is shown in drawing 3 in the circular cylinder part 1a of the main part 1 of a stamp -- as -- the hoop direction of said receptacle side 8 -- two or more hoop direction thickness specifically protrudes the narrow width rib-like projection 16 on point positions, such as four etc. points, really downward at 0.9 mm. Each projection 16 of the figure is formed so that a declivity may be carried out over the inner surface of the circular cylinder part 1a from the receptacle side 8.

[0025]The formed dent 15 in every direction in a grid pattern is presenting the linear groove by plane view.

In the upper surface of the upper surface 12 of the rubber stamp character style 2, it is an opening state on the periphery edge.

And the hoop direction width and the projection amount of each projection 16 are formed in the heights 13 and the size which will be dented and will carry out abbreviation coincidence at the aperture width and the depth of 15, respectively if it puts in another way. Therefore, when the rubber stamp character style 2 is fitted into the circular cylinder part 1a and wearing immobilization of the rubber stamp character style 2 is carried out in the above-mentioned way, each projection 16 ***** to said dent 15 between the adjoining heights 13.13 in the outer periphery part of the upper surface 12 of the rubber stamp character style 2. The baffle of the rubber printing pair 2 can be planned by this concavo-convex fitting, without exerting a compression set etc. on the body part of the rubber stamp character style 2, and as shown in drawing 2, whenever it sees the front display 17 put into the outside surface of said cap 4 and seals, the seal of a right direction can be obtained.

[0026]In a figure, 20 is an inner cylinder object which allows the main part 1 of a stamp to fit in from a lower part, and allows being equipped with the cap 4 from the upper part, enabling free attachment and detachment. From the upper part, the upper bed opening 6 of the main part 1 of a stamp is equipped with ink cart RISSHI 21 so that receipts and payments are possible, and ink is supplied to the ink occlusion mat 3 via this ink cartridge 21. Outside attachment wearing of the lid 22 can be carried out from a lower part in the lower end of the inner cylinder object 20, enabling free attachment and detachment, and it can cover with this lid 22 to the stamp face 10 of the lower end of the rubber stamp character style 2 at the time of non-use.

[0027](The 2nd example) Drawing 7 shows the 2nd example of this invention, and installed the projection 16 for baffles downward from said receptacle side 8 at one. Any of a round shape thru/or a square shape may be sufficient as a section, and the projection 16 in this case has only to fit into said dent 15, if the compression set of the upper surface 12 of the rubber stamp character style 2 is not carried out greatly caudad.

[0028](The 3rd example) Drawing 8 shows the 3rd example of this invention, and, now, the notched side 16a was formed in said receptacle side 8. Also by this, where press deformation of this is lightly carried out to the upper surface 12 of the rubber stamp character style 2 which is presenting rugged form in existence of the heights 13, the notched side 16a improves friction engagement, and the baffle of the rubber stamp character style 2 can be planned.

[0029](Example of another embodiment) The projection 16 and the notched side 16a which should be formed in the receptacle side 8 should just be formed in at least one on the receptacle side 8. The receptacle side 8 does not need to be formed in the inner surface of the circular cylinder part 1a as ***** at continuous state, and may be formed in the shape of division. The heights 13 may be made into a semi-sphere not only in a square shape, for example. A size, an arrangement space, etc. of the heights 13 make a size, a raw material, etc. of the stamp face 10 correspond, and can be changed suitably. The projection 16 and the notched side 16a also include the gestalt to which the compression set of the upper surface 12 containing the heights 13 of the rubber stamp character style 2 is carried out

selectively. It is a concept which also includes the gestalt by which this including the inner cylinder object 20, the cap 4, etc. which were illustrated, for example was formed in one in the main part 1 of a stamp in this invention.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is an expansion vertical section front view of an important section.

[Drawing 2]It is a whole appearance perspective view and exploded perspective view.

[Drawing 3]It is a partial notching perspective view of the main part of a stamp.

[Drawing 4]It is the perspective view which looked at rubber stamp character style from the upper surface side.

[Drawing 5]It is a vertical section front view of an important section.

[Drawing 6]It is a vertical section front view of the important section at the time of use.

[Drawing 7]It is a vertical section front view of an important section showing the 2nd example.

[Drawing 8]It is a vertical section front view of an important section showing the 3rd example.

[Description of Notations]

- 1 The main part of a stamp
- 2 Rubber stamp character style
- 3 Ink occlusion mat
- 10 Stamp face
- 11 The lower end edge of the main part of a stamp
- 12 The upper surface of rubber stamp character style
- 13 Heights
- 14 The undersurface of an ink occlusion mat
- 15 Dent
- 16 Projection
- 17 Front display

[Translation done.]

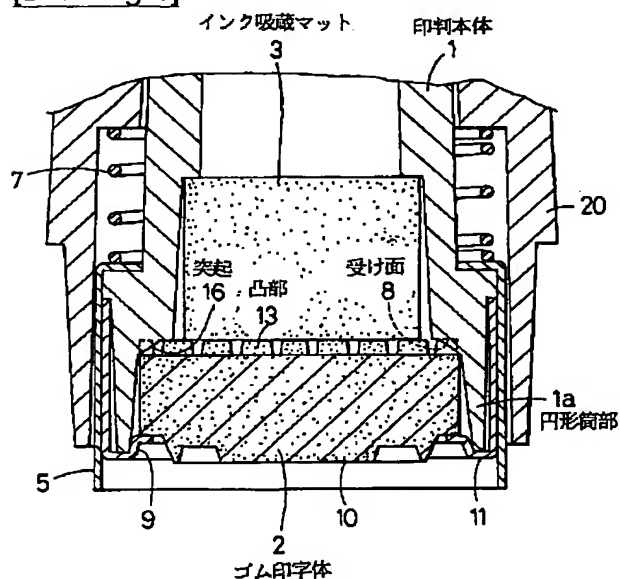
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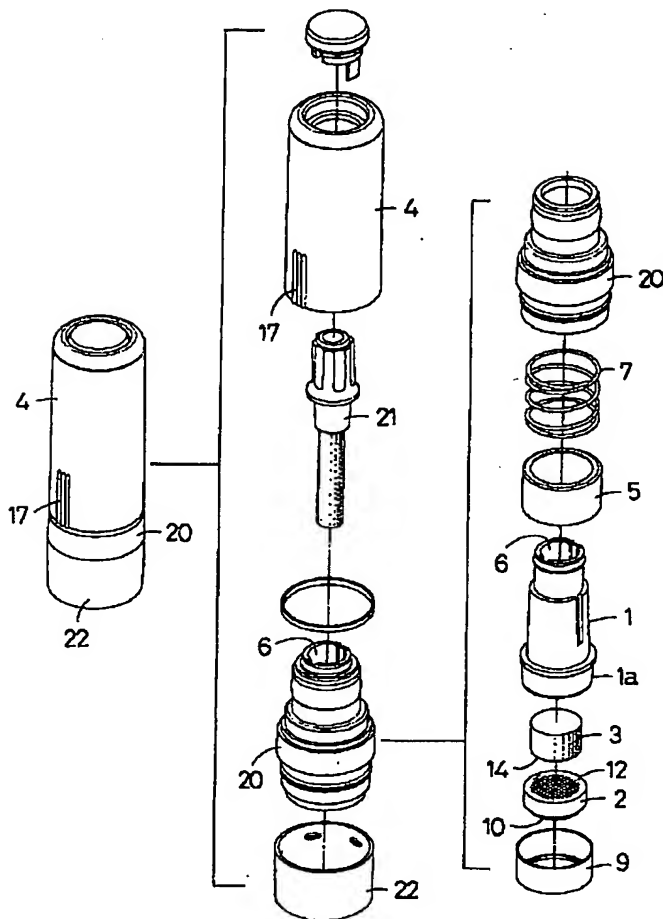
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DRAWINGS

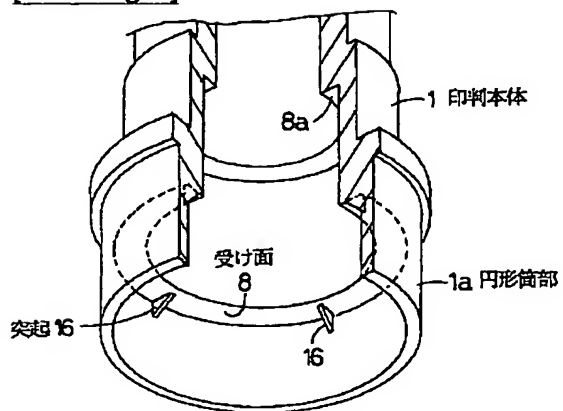
[Drawing 1]



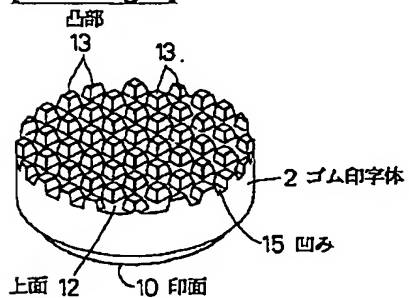
[Drawing 2]



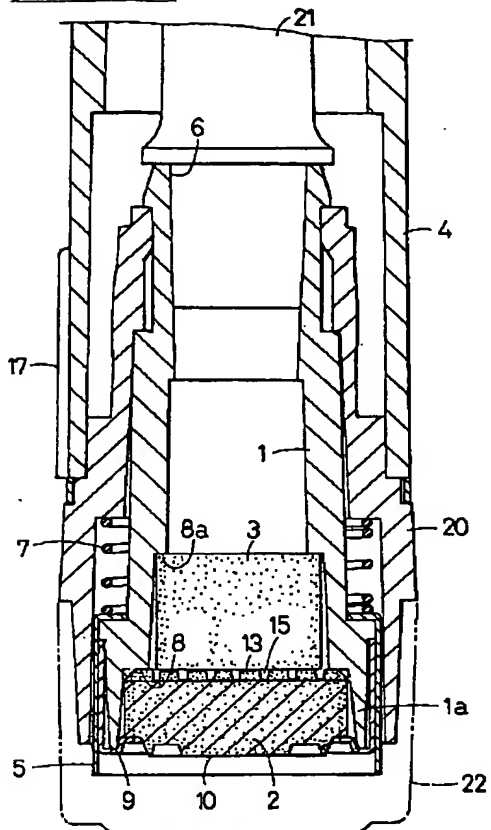
[Drawing 3]



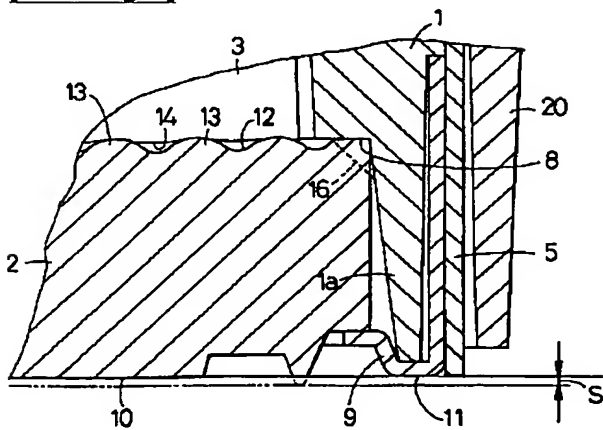
[Drawing 4]



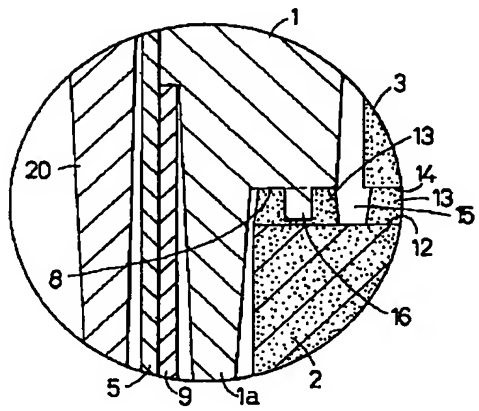
[Drawing 5]



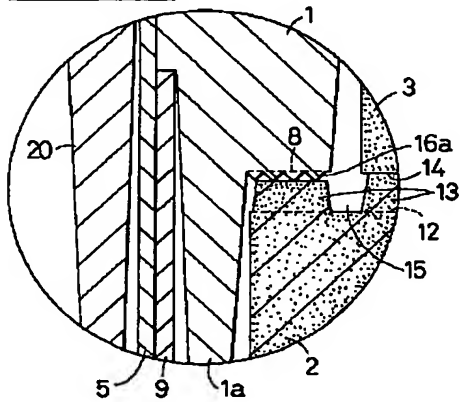
[Drawing 6]



[Drawing 7]



[Drawing 8]



[Translation done.]

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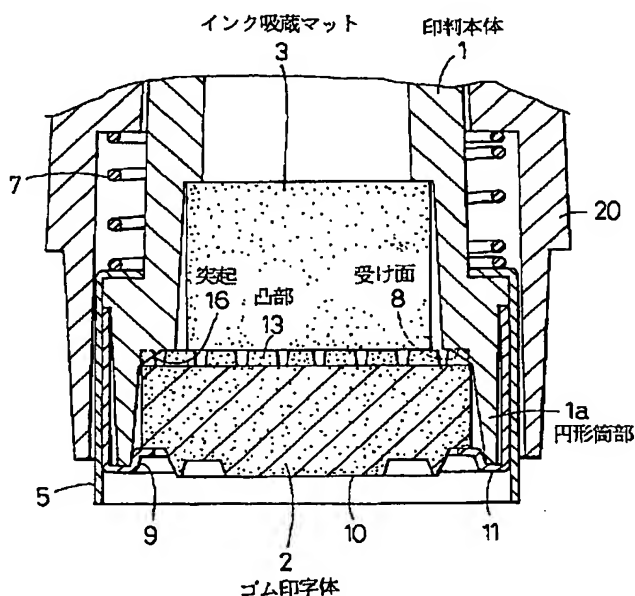
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(54) 【発明の名称】 丸型ゴム印判

(57) 【要約】

【構成】 印刷本体 1 の下端の円形筒部 1 a 内に、多孔性のゴム印字体 2 を嵌合し、ゴム印字体 2 上にインク吸蔵マット 3 を配置する。ゴム印字体 2 の上面 1 2 に多数の凸部 1 3 を全面にわたって一体に成形する。ゴム印字体 2 の上面 1 2 は、凸部 1 3 群を介してインク吸蔵マット 3 の下面 1 4 に接触させておく。円形筒部 1 a 内に受け面 8 を有し、この受け面 8 でゴム印字体 2 の上面 1 2 の外周縁部を受け止める。受け面 8 に突起 1 6 を設ける。ゴム印字体 2 の上面 1 2 において、隣接する凸部 1 3 ・ 1 3 間に凹み 1 5 を有し、前記突起 1 6 が該凹み 1 5 に嵌係合している。

【効果】 捺印時に凸部13群が先行して圧縮変形することで、印面10の高さのバラつきを吸収できる。受け面8の突起16がゴム印字体2の凹み15に係合することで、ゴム印字体2の回り止めが図られる。



【特許請求の範囲】

【請求項 1】 印判本体 1 側の下端の円形筒部 1 a 内に、円形に形成された多孔性のゴム印字体 2 を嵌装してあり、

円形筒部 1 a 内にインク吸蔵マット 3 がゴム印字体 2 上に位置するよう配設されており、

ゴム印字体 2 の上面 1 2 に、多数の凸部 1 3 が全面にわたって一体に突出形成されており、

ゴム印字体 2 の上面 1 2 が凸部 1 3 群を介してインク吸蔵マット 3 の下面 1 4 に接触している丸型ゴム印判において、

印判本体 1 側の円形筒部 1 a の内周面に、ゴム印字体 2 の上面 1 2 の外周縁部を受ける下向きの受け面 8 が形成されており、

該受け面 8 の適所に、ゴム印字体 2 の上面 1 2 における外周縁部の前記凸部 1 3 間の凹み 1 5 に係合する突起 1 6 を設けてある丸型ゴム印判。

【請求項 2】 印判本体 1 側の下端の円形筒部 1 a 内に、円形に形成された多孔性のゴム印字体 2 を嵌装してあり、

円形筒部 1 a 内にインク吸蔵マット 3 がゴム印字体 2 上に位置するよう配設されており、

ゴム印字体 2 の上面 1 2 に、多数の凸部 1 3 が全面にわたって一体に突出形成されており、

ゴム印字体 2 の上面 1 2 が凸部 1 3 群を介してインク吸蔵マット 3 の下面 1 4 に接触している丸型ゴム印判において、

印判本体 1 側の円形筒部 1 a の内周面に、ゴム印字体 2 の上面 1 2 の外周縁部を受ける下向きの受け面 8 が形成されており、

該受け面 8 に、ゴム印字体 2 の上面 1 2 における外周縁部に係合するギザギザ面 1 6 a が設けてあることを特徴とする丸型ゴム印判。

【請求項 3】 ゴム印字体 2 の上面 1 2 に、多数の凸部 1 3 が基盤の目状に突出形成されている請求項 1 又は 2 記載の丸型ゴム印判。

【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、印判本体の下端筒部内に連続捺印を可能とする多孔性のゴム印字体を備えた浸透ゴム印判、更に詳しくはネーム印と称されている丸型のゴム印判に関する。

【0002】

【従来の技術】従来のこの種ゴム印判では、添付図面で説明すると、印判本体 1 の下端の円形筒部 1 a 内に、多孔性のゴム印字体 2 を止め金具 9 を介して固定し、円形筒部 1 a 内にインク吸蔵マット 3 をこれの下面 1 4 がゴム印字体 2 の上面 1 2 に全面接触するよう配してある。これによればインク吸蔵マット 3 にインクを予め上方より供給して吸蔵させておき、このインクを使用に伴って

ゴム印字体 2 に移行させている。

【0003】しかるに、ゴム印字体 2 は多孔性であるから圧縮変形しやすく、図 6 に示すように下端の印面 1 0 の突出寸法 S、つまり止め金具 9 と印面 1 0 との間の寸法 S は、厳密に設定する必要がある。この突出寸法 S が大き過ぎると捺印時に印面 1 0 が過剰に圧縮変形して印影が型崩れしインクがベタつく。突出寸法 S が小さ過ぎると捺印不能になったり、印影にかすれが出るからである。しかし、上記の突出寸法 S を厳しく管理するためには、印判本体 1、ゴム印字体 2 および止め金具 9 などの製作精度を高め、組み付け精度も確保する必要があり、これが生産性や歩留まりなどが悪くし、結果的に製品の単価を高くしている。かといって、印面の高さ調節機構を印判本体 1 内に別に設けるのも、部材点数が増えて製作コストが高くつく。

【0004】そこで本出願人は、特願平 5-294257 号を以て、図示するごとくゴム印字体 2 の上面 1 2 に多数の凸部 1 3 を全面にわたって一体に突出形成し、ゴム印字体 2 の上面 1 2 を凸部 1 3 群を介してインク吸蔵マット 3 の下面 1 4 に接触させる構造のゴム印判を提案した。これによれば、圧縮変形性に富むゴム印字体 2 の下端印面 1 0 を紙面に押すと、前記凸部 1 3 群が先行して圧縮変形するので、印面 1 0 の前記突出寸法 S を従来よりも大きめに設定しておけば、該突出寸法 S のバラつきをよく吸収して寸法精度誤差に対応できるものが得られた。

【0005】ところが、更に別の問題に気付いた。ゴム印字体 2 を円形とした丸型印判においては、もともと印判本体 1 の円形筒部 1 a 内に圧嵌して確りと固定する訳には行かず、インクを含むと当然に膨潤する性向を持つ。そのため使用時に、ゴム印字体 2 でのインク含有量が減ってくると、円形筒部 1 a 内でゴム印字体 2 が不用意に回り、印判本体 1 の外表面に設けた前面表示 1 7 と合致しない状態で捺印される不良品の発生をみた。

【0006】このようなゴム印字体 2 の回り止めを図るために、実公平 2-43745 号公報では、印判本体 1 側の円形筒部 1 a 内に先端が尖った複数の突起を下向きに突設し、これら各突起がゴム印字体 2 の上面 1 2 にこれ自体の弾性を利用して食い込むようになっている。これによれば、ゴム印字体 2 の相対的な回り止めを図ることができる。

【0007】

【発明が解決しようとする課題】しかし、多孔性のゴム印字体 2 は、弾性に富むので前記突起を食い込ませた部分に凹み変形を生じ、この凹み変形がゴム印字体 2 の上面 1 2 に波及する。場合によってはゴム印字体 2 の下端印面 1 0 にまで凹み変形が及び、印面が面一状の高精度に仕上がらない要因ともなる。加えて、ゴム印字体 2 が前述の凹み変形を受けるということは、内部の連続気孔が圧縮変形を受けることを意味し、該当部分でのインク

の流れが悪くなる。そのため、ゴム印字体 2 の下端印面 10 において、インクの滲み出し量にバラつきを生じ、印影の一部にベタつきや掠れが出て、捺印ムラを招くおそれがある。

【0008】そこで本発明の目的は、インク吸蔵マットおよび多孔性のゴム印字体を備えていて連続捺印が可能な丸型ゴム印判において、印判本体からのゴム印字体の印面の突出寸法にバラつきがあっても、このバラつきを簡便な手段で吸収して、常に鮮明な連続捺印を可能とするにある。本発明の他の目的は、印判本体側の下端の円形筒部内に嵌装した円形のゴム印字体に回り止め手段を講じた丸型印判を得るにある。

【0009】

【課題を解決するための手段】本発明の丸型ゴム印判は、図 5 に示すごとく印判本体 1 側の下端の円形筒部 1a 内に、円形に形成された多孔性のゴム印字体 2 を嵌装してあり、円形筒部 1a 内にインク吸蔵マット 3 がゴム印字体 2 上に位置するよう配設されている。ゴム印字体 2 の上面 12 には、多数の凸部 13 が全面にわたって一体に突出形成されており、ゴム印字体 2 の上面 12 が凸部 13 群を介してインク吸蔵マット 3 の下面 14 に接触している。具体的には、図 4 に示すごとくゴム印字体 2 に多数の凸部 13 を基盤の目状に形成する。

【0010】かかる丸型ゴム印判において、本発明では図 1 および図 3 に示すごとく印判本体 1 側の円形筒部 1a の内周面に、ゴム印字体 2 の上面 12 の外周縁部を受ける下向きの受け面 8 が形成されているが、この受け面 8 の適所に突起 16 を突設し、ゴム印字体 2 の上面 12 における外周縁部の前記凸部 13 間の凹み 15 に、前記突起 16 が係合するようにしたことを特徴とする。または、回り止め手段として、図 8 に示すごとく前記受け面 8 には、突起 16 に代わるギザギザ面 16a を形成し、このギザギザ面 16a がゴム印字体 2 の上面 12 における外周縁部に係合するようにしたものである。

【0011】

【作用】多孔性のゴム印字体 2 は、もともと圧縮変形性に富んでいる。従って、図 6 に示すごとくその印面 10 を紙面に押圧すると、その反力で各凸部 13 から先に積極的に圧縮変形する。従って、印面 10 の突出寸法 S を従来よりも大きめに設定しても、その寸法誤差は凸部 13 群の圧縮変形で吸収される。各凸部 13 は常にインク吸蔵マット 3 と接しているため、ゴム印字体 2 内のインクが不足すると、凸部 13 が圧縮変形されているときに限らず、常に各凸部 13 群を介してインク吸蔵マット 3 からゴム印字体 2 内にインクが流入する。

【0012】印判本体 1 側の円形筒部 1a 内において、ゴム印字体 2 の上面 12 は、外周縁部が前記凸部 13 を介して円形筒部 1a の受け面 8 に受け止められている。このとき受け面 8 の適所に設けた突起 16 が、印判本体 1 の上面 12 において隣接する凸部 13・13 間の凹み

15 に入り込み係合し、これで円形筒部 1a 内でゴム印字体 2 が周方向に回るのを防止する。組み込み当初に突起 16 が凸部 13 に乗り上がることがあっても、僅かでもゴム印字体 2 が回れば、該突起 16 は凸部 13・13 間の凹み 15 に落ち込み係合するので、ゴム印字体 2 のそれ以上の回転を阻止する。なお、この突起 16 が複数箇所に設けてあれば、組み込み当初に少なくともそのうちのひとつの突起 16 が凹み 15 に係合する可能性が高くなる。

【0013】前記受け面 8 にギザギザ面 16a を全面的に又は部分的に形成してあるときは、このギザギザ面 16a が前記凸部 13 群によって生じた印判本体 1 の凹凸状の上面 12 に摩擦係合し、これによっても、ゴム印字体 2 の本体内部にまで押圧変形を及ぼすことなくゴム印字体 2 の回り止めを図る。

【0014】

【発明の効果】本発明では、ゴム印字体 2 の上面 12 に一体に設けた多数の凸部 13 群が捺印時に先行して圧縮変形するので、印面 10 の突出寸法 S を従来より大きめに設定しても、凸部 13 の圧縮変形で前記寸法 S の誤差を吸収することになり、常に鮮明な連続捺印が可能になる。すなわち、品質の低下を招くこと無しに、ゴム印字体 2 や止め金具 9 などの加工精度ないし組付け精度の許容範囲が広くできるので、生産性が向上し、浸透ゴム印判を安価に提供できる。

【0015】更に本発明において前記受け面 8 に形成した前記突起 16 又はギザギザ面 16a は、ゴム印字体 2 の上面の凸部 13 を利用して、ゴム印字体 2 の上面に接当係合するので、これによって印判本体 1 の下端の円形筒部 1a 内で円形のゴム印字体 2 が不用意に回るのを防止できるとともに、この回り止めの存在がゴム印字体 2 の本体内部に圧縮変形を加えるなどの悪影響をも無くせる利点を有する。

【0016】

【実施例】

（第 1 実施例）図 1 ないし図 6 は本発明に係る丸型ゴム印判の第 1 実施例を示しており、丸型の印判本体 1 側の下端の円形筒部 1a 内には、円形に成形した多孔性のゴム印字体 2 を固定してあり、円形筒部 1a 内にインク吸蔵マット 3 をゴム印字体 2 の上方に位置させて配設してある。

【0017】図 2 において印判本体 1 の外周上方には握り部を兼ねた縦長円筒形のキャップ 4 が着脱自在に装着されており、印判本体 1 の下端側に円形のスタンド 5 が下方への抜け止めを図って上下スライド自在に装着してある。キャップ 4 を取り外すと、印判本体 1 の上端開口 6 を介してインク吸蔵マット 3 に上方からインクが補給できる。スタンド 5 は、これの上端と印判本体 1 との間に装着した圧縮スプリング 7 で下方に突出付勢されている。

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【0018】図2において、ゴム印字体2は連続気孔を有する多孔性のゴム材で成形されている。円形筒部1aは、図3に示すごとく実質的に同一肉厚を以て段付き状に形成されており、従って内周面に下向きの段付き受け面8を有し、この受け面8より下方が径大に、上方が径小になっている。円形筒部1aに対してこれの開口下面側からインク吸蔵マット3が先入れされ、次いでゴム印字体2が嵌合される。そして、図5に示すごとくゴム印字体2はこれの上面12の外周縁部が受け面8で受け止められた状態で止め金具9を介して印判本体1に固定される。止め金具9の下端縁が印判本体1の下端縁11になっており、該下端縁11の下方にゴム印字体2の下端の印面10が僅かに突出している。

【0019】インク吸蔵マット3は酢酸ビニルなどで多孔質の円柱状に形成されている。インク吸蔵マット3はその気孔率および気孔径がゴム印字体2のそれよりも大きく、ゴム印字体2よりも硬質であって、インク吸蔵マット3に含ませたインクはゴム印字体2の使用に伴って移行して行く。円形筒部1aの内周面には、図3および図5に示すごとく前記受け面8より更に上方に別の段付き受け面8aが形成されていて、インク吸蔵マット3の上面の外周縁部が該受け面8aに受け止められ、この状態でインク吸蔵マット3の下面14がゴム印字体2の上面12に接触する。

【0020】不使用時には、図1に示すようにスタンド5の下部が圧縮スプリング7の弾発力で印判本体1の下方に突出しており、ゴム印字体2の印面10が紙面などに触れるのを防止している。使用に際してスタンド5の下端開口を紙面に当てがい、印判本体1を上方から押すと、図6に示すごとく圧縮スプリング7のばね力に抗してスタンド5が上昇し、印面10が紙面に接触する。

【0021】かかる丸型ゴム印判において、図1および図4に示すようにゴム印字体2の上面12に多数の小さな凸部13を全面にわたって一定間隔置きに、具体的には基盤の目状に一体に突出形成し、ゴム印字体2の上面12がこれの凸部13群を介してインク吸蔵マット3の平坦な下面14に接触するようにした。図4において、その各凸部13は一辺の長さが1.0mm、高さが0.7mmの正四角形に形成し、各凸部13の配設ピッチ、すなわち隣接する各凸部13・13間の凹み15の幅は約1.0mmとした。各凸部13の高さは0.7~1.0mmの範囲内で印面10の大きさに対応させて変更することができる。そして、印判本体1の下端縁11と印面10との間の寸法Sは、0.3~0.5mmに設定した。この印面10の突出寸法Sは従来のそれよりも大きめである。

【0022】図6において、印判本体1の下端縁11が紙面に接当するまで印面10を紙面に押し付けると、まず各凸部13群が先行して圧縮変形し、これで印面10に加わる圧縮変形力を吸収する。すなわち、多孔性のゴム印字体2は、もともと圧縮変形性に富んでいるが、断

面積の小さい各凸部13は更に圧縮変形しやすい。従って、印面10の突出寸法Sを従来より大きく設定しても、凸部13群が先行して圧縮変形するので、印面10に過度の圧縮変形力が及ばない。その結果、印影の型崩れやインクのべたつきがない鮮明な捺印が行える。換言すれば、上記寸法Sを従来より大きめの寸法に設定しておけるから、印判本体1、ゴム印字体2、止め金具9などの加工精度、それに組み付け精度に大きな影響を受けることなく浸透ゴム印判を製作できた。

【0023】各凸部13が圧縮変形することで、該当部分に含浸のインクは前記凹み15に絞り出される。それに各凸部13は不使用時も含めて常にインク吸蔵マット3に接しているので、ゴム印字体2内のインクが減少すれば、これらの凸部13を介してインク吸蔵マット3からゴム印字体2にインクが浸透して行き、連続捺印を可能にする。前記凹み15はインク溜まりとしても機能するので、印判内に含浸されるインクの総量が増え、鮮明な捺印回数も多くなる。

【0024】上記構造の丸型印判において、印判本体1の円形筒部1a内には、図3に示すごとく前記受け面8の周方向の複数箇所、具体的には4点等点位置に細幅リブ状の突起16を周方向厚みが0.9mmで下向きに一体突設する。図の各突起16は受け面8から円形筒部1aの内面にわたって下り傾斜するよう形成されている。

【0025】基盤の目状の形成された縦横の凹み15は、平面視で直線の溝状を呈しており、ゴム印字体2の上面12の上面において外周縁で開口状態になっている。そして、各突起16の周方向幅および突出量は凸部13、換言すれば凹み15の開口幅および深さにそれぞれ略一致する大きさに形成されている。従って、円形筒部1aにゴム印字体2を嵌合し、前述の要領でゴム印字体2を装着固定したとき、各突起16がゴム印字体2の上面12の外周縁部において、隣接する凸部13・13間の前記凹み15に嵌係合する。この凹凸嵌合により、ゴム印字体2の本体部に圧縮変形などを及ぼさずにゴム印字体2の回り止めを図れ、図2に示すごとく前記キャップ4の外表面に入れた前面表示17を見て捺印すれば、常に正しい方向の印影を得ることができる。

【0026】なお、図において、20は印判本体1が下方から嵌合することを許し、キャップ4が上方から着脱自在に装着されることを許す中筒体である。印判本体1の上端開口6にはインクカートリッジ21が上方から出し入れ可能に装着され、このインクカートリッジ21を介してインクがインク吸蔵マット3に供給される。中筒体20の下端には下方から蓋22が着脱自在に外嵌装着でき、この蓋22で不使用時にゴム印字体2の下端の印面10に覆うことができる。

【0027】(第2実施例)図7は本発明の第2実施例を示しており、前記受け面8から下向きに回り止め用の突起16を一体に垂設した。この場合の突起16は断面

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が丸形ないし角形のいずれでもよく、ゴム印字体 2 の上面 12 を下方に大きく圧縮変形させるものでなければ、前記凹み 15 に嵌合しさえすればよい。

【0028】（第3実施例）図8は本発明の第3実施例を示しており、これでは前記受け面 8 にギザギザ面 16a を形成した。これによっても、凸部 13 の存在で凹凸状を呈しているゴム印字体 2 の上面 12 にこれを軽く押圧変形させた状態でギザギザ面 16a がよく摩擦係合し、ゴム印字体 2 の回り止めを図れる。

【0029】（別実施態様例）受け面 8 に形成すべき突起 16 やギザギザ面 16a は、受け面 8 上の少なくとも一箇所に形成されていればよい。受け面 8 は円形筒部 1a の内面に周回鑿として連続状に形成されている必要はなく、分断状に形成されていてもよい。凸部 13 は角形に限らず、例えば半球形にしてもよい。凸部 13 の大きさや配置間隔なども印面 10 の大きさや素材などに対応させて適宜変更できる。突起 16 やギザギザ面 16a はゴム印字体 2 の凸部 13 を含む上面 12 を部分的に圧縮変形させる形態をも含む。また、本発明における印判本体 1 とは、例えば図示した中筒部 20 およびキャップ 4

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* 【図面の簡単な説明】

【図 1】 要部の拡大縦断正面図である。

【図 2】 全体の外観斜視図と分解斜視図である。

【図 3】 印判本体の一部切り欠き斜視図である。

【図 4】 ゴム印字体を上面側から見た斜視図である。

【図 5】 要部の縦断正面図である。

【図 6】 使用時における要部の縦断正面図である。

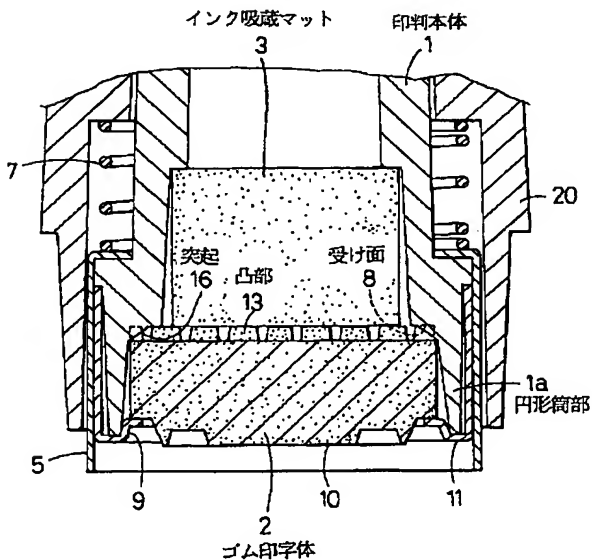
【図 7】 第2実施例を示す要部の縦断正面図である。

【図 8】 第3実施例を示す要部の縦断正面図である。

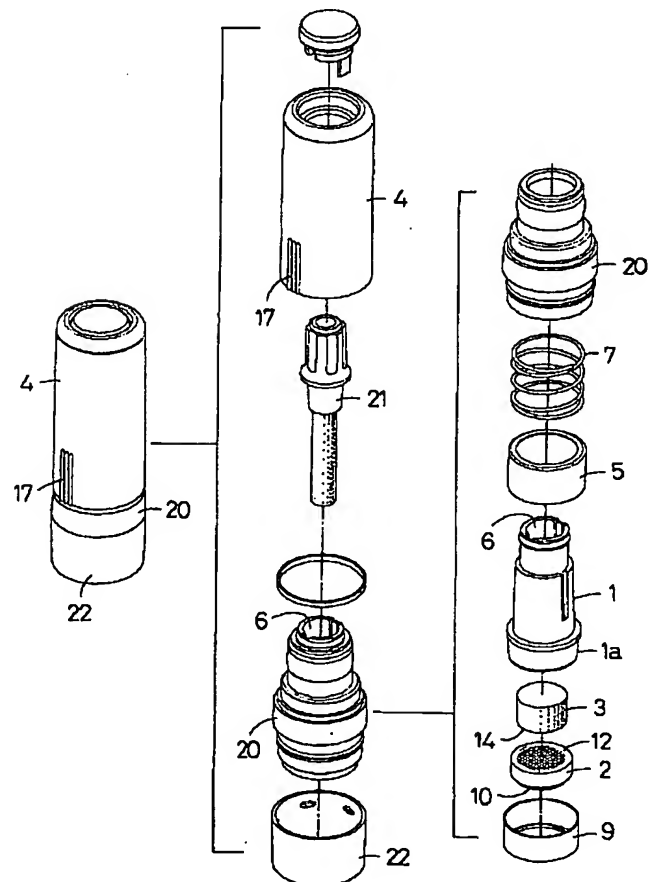
【符号の説明】

- 1 印判本体
- 2 ゴム印字体
- 3 インク吸蔵マット
- 10 印面
- 11 印判本体の下端縁
- 12 ゴム印字体の上面
- 13 凸部
- 14 インク吸蔵マットの下面
- 15 凹み
- 16 突起
- 17 前面表示

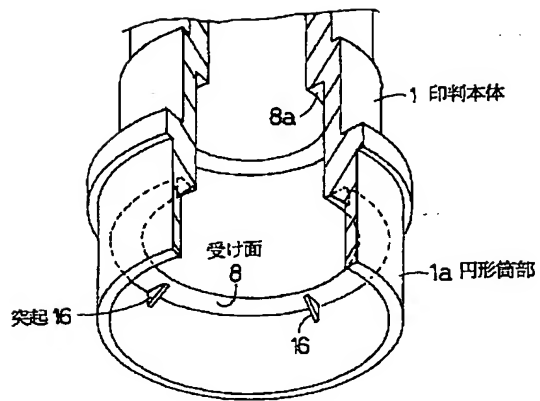
【図 1】



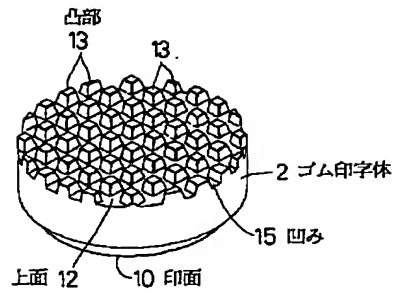
【図 2】



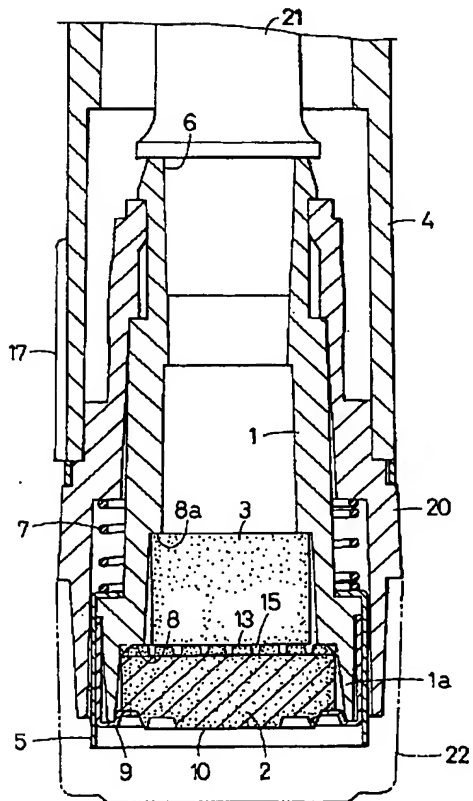
【図 3】



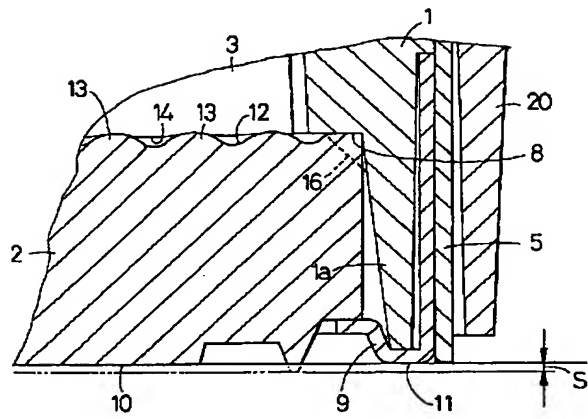
【図 4】



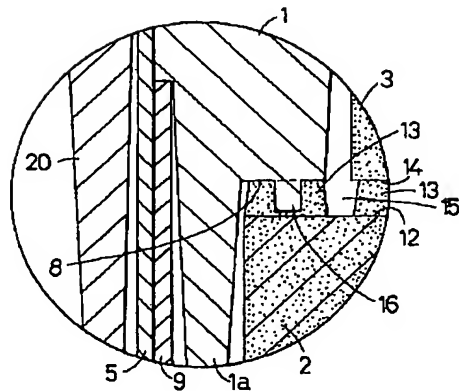
【図 5】



【図 6】



【図 7】



【図8】

